

**REMARKS**

Favorable consideration and allowance of claims 13-21, 24, 26 and 27-30 are respectfully requested in view of the foregoing amendments and the following remarks.

Claims 13-21, 24 and 26 were objected to due to various informalities. Applicants amend these claims as suggested by the Examiner to address the noted informalities. Thus, the objection should be removed.

Claims 13-21, 24 and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over GB 2270130 (Goebels; hereinafter "GB '130") in view of Goebels et al. (US 6,371,573) and Holler (US 6,741,922). Applicants respectfully traverse the rejection as set forth below.

Applicants submit that GB '130, Goebels and Holler do not teach or suggest the following feature of claim 13 (emphasis added):

a controlling and regulating unit operatively configured to control the only one additional solenoid control valve to connect the control input of the respective relay valve *with the compressed air reservoir* for adapting the speed of rotation of a driven wheel, which initially slips during acceleration, to the speed of rotation of a non-slipping wheel, and the solenoid control valve assigned to a slipping wheel is controlled by the controlling and regulating unit *to connect the compressed-air reservoir to the control input of the respective relay valve in a timed manner* depending on the slip rate of the slipping wheel and a change in velocity of said slipping wheel, whereby the solenoid control valve assigned to the slipping wheel is alternatively switched back and forth between a pressure buildup position and a pressure reduction position by the controlling and regulating unit; and

the controlling and regulating unit determines a risk of overturning the vehicle, based on the detected lateral acceleration.

GB '130 discloses a pressure regulator module for a motor vehicle pneumatic braking system for a wheel slip dependent controlling or regulating of braking pressures applied to two separate working connections, including a two way valve assembly having one relay valve for each conduit. According to the embodiment disclosed in Fig. 2a, which is cited in the Office Action, a proportional valve 30, 30' is associated with each relay valve as a control valve. Thus, the electronic circuit for controlling such a proportional valve is provided as a rather complicated electrical regulating circuit. Furthermore, the construction of the proportional valve is very complicated and expensive. GB '130 includes no description or indication with reference to Fig. 2a, if and how a wheel slip control system would be realized, or the determining and eliminating of the risk of overturning, as claimed in Applicants' claim 13.

The only embodiment designated as suitable for wheel slip control in GB '130 is the embodiment shown in Fig. 1. This embodiment operates with two control valves 9 and 12 inserted in front of the solenoid valves 7 and 8. For wheel slip control, this means that for interferences with the brake system independent from the wishes of the driver, the solenoid valve 12 is initially switched, so that no more pneumatic control signals can be provided to the solenoid valves 7 and 8 via the control conduit 13, but only reservoir pressure via the conduit 17.

As disclosed on page 13, line 25 – page 14, line 3 of the reference, however, the respective solenoid valve 7 or 8 is not being timed ("not pulsed") during wheel

slip control operation, but only controlled, so that it prevents the compressed air from being supplied to the pneumatic control input of the respective solenoid valve. A person skilled in the art interprets this as switching the solenoid valve once, and leaving it in this switching position.

In contrast to this disclosure of the operation of the device in GB '130, in claim 13 of the present application "the solenoid control valve assigned to a slipping wheel is controlled by the controlling and regulating unit to connect the compressed-air reservoir to the control input of the respective relay valve in a timed manner depending on the slip rate of the slipping wheel and a change in velocity of said slipping wheel."

The Office Action refers to Goebels as disclosing controlling a solenoid control valve in a timed manner. *See p. 4, third paragraph.* The timed control referred to in Goebels, however, is the timing for connecting the brake valve 49/61 pressure to the PMV 37/55 (FIGS. 6, 7). In other words, the timed controlling disclosed by Goebels is not timed control for connecting a reservoir pressure to the relay valves. Thus, its disclosure does not correspond to the feature of claim 13 of the controlling and regulating unit that is configured to connect the compressed-air reservoir to the control input of the respective relay valve in a timed manner depending on the slip rate of the slipping wheel and a change in velocity of said slipping wheel.

Also, Holler does not make up for the above-described deficiency of GB '130 and Goebels.

Therefore, claim 13 is patentable over GB '130, Goebels and Holler.

Additionally, it would not have been obvious at the time of the invention to combine the teachings of GB '130, Goebels and Holler. The embodiment according to Fig. 7 of Goebels relates to a braking system, in which the 3/2 way valve 55 connects the control pressure of the brake valve 61, in case of an ABS in a timed manner, to the control input of the relay valve 57 (See column 8, lines 8 to 15: "...only in the control line..."). If these teachings are transposed to the embodiment according to Fig. 1 of GB '130, the solenoid valve 12 or the solenoid valve 9, which are integrated and inserted into the pneumatic control line 13, which is run from the operating brake valve, would have to be controlled in a timed manner. This, however, does not lead to the invention.

In a wheel slip control system, controlling the brake pressures is performed independently from the control pressure generated by the operating brake valve. According to the invention, consequently not the control pressure generated by the brake operation valve, but a reservoir pressure originating from a compressed air reservoir, is connected to the control input of the respective relay valve in a manner timed by the solenoid valves, which constitutes a substantial operational difference.

Timing the *reservoir pressure* for providing wheel slip control through two 3/2 way valves, however, is not known in the state of the art. Thus, the assertion that it would have been obvious to combine the teachings of Goebels with GB

'130 is based on an impermissible hindsight reconstruction. Therefore, claim 13 is patentable over the prior art for this additional reason.

Claims 14-21 and 24 are patentable due to their dependence from claim 13.

Applicants submit that claim 26 is patentable for reasons analogous to those for claim 13.

New claims 27-30 are added to further define the pressure regulator modules claimed in claims 13 and 26, respectively. Support for these claims is present, for example, in the specification at paragraphs [0020] and [0041] and FIG. 3. Claims 27-30 are patentable due to their dependence from claims 13 and 26, respectively, and because the prior art does not teach or suggest their limitations.

In view of the foregoing, Applicants submit that the application is in condition for allowance and such action is earnestly solicited.

If there are any questions regarding this response or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket # 037068.55856US).

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Respectfully submitted,



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